

Carr, Lucian

FROM THE ANNIVERSARY MEMOIRS OF THE BOSTON SOCIETY OF NATURAL HISTORY

NOTES ON
THE CRANIA OF NEW ENGLAND INDIANS.

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BY LUCIEN CARR,

ASSISTANT CURATOR, PEABODY MUSEUM OF AMERICAN ARCHEOLOGY AND ETHNOLOGY,
CAMBRIDGE, MASS.



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ACCORDING to the earliest writers, New England, or at least, all that portion of it lying between the Hudson river and the Saco, was inhabited by "five principal nations of Indians." Of these, it may be roughly said that: 1st, the Pequots, or Mohegans, held the greater part of Connecticut, with their principal town at, or near, the site of the present city of New London; 2d, the "Narragansitts" occupied what is now known as Rhode Island; 3d, the Pawkannawkuts, or Wampanoags, lived in southeastern Massachusetts; 4th, the Massachusetts were just north of them "in the bay of that name and the adjacent parts," and 5th, the Pawtucketts lived still farther to the north, "with their dominion reaching so far as the English jurisdiction, or colony of the Massachusetts doth now extend."¹ Beyond this limit and within the confines of the present state of Maine, there were to be found the Penobscots and Norridgewocks and kindred tribes, or Abenakis² as they were called by the French, and still farther to the east and north, the dreaded Tarantines, whom Schoolcraft identifies with the Micmacs. With this latter group, however, I am not now concerned, and shall confine my observations to the five principal "Sachemships" of New England. These were subdivided into a number of smaller tribes, or to quote the precise words of the old chronicler, they "had dominion over," or "had under them many other petty governours" or "Sagamores." Although thus divided and subdivided, and not unfrequently engaged in internecine strife, there appears to have been but little if any difference between them, judging from what we are told of their appearance and language, their manners and customs, as well as of their mode of life and form of government.³ Indeed we may even go a step farther, and basing our conclusion upon the vocabularies that have come down to us, declare with Mr. Gallatin, that the Indians from the Saco river to the Hudson belonged to the Algonkin-Lenapé family.⁴

¹ Gookin's History of the Indians of New England, published in the Collections of the Massachusetts Historical Society, Vol. I, first series, p. 147 *et seq.* Archaeologia Americana, Vol. II, p. 33.

² Schoolcraft. Vol. v, p. 218.

³ Consult Description of New England, by Capt. John Smith; History of the Indians of New England, by Daniel Gookin; Josselyn's Two Voyages to New England; Gorges'

Description of New England; Brereton's Discovery of the North Part of Virginia, &c., &c. These have all been republished in the Collections of the Massachusetts Historical Society.

⁴ They "spoke, though with many varieties, what may be considered as the same language, and one of the most extensively spoken of those of the Algonkin-Lenapé Family." Archaeologia Americana, Vol. II, p. 36.

This similarity in language, appearance and customs, justifies the treatment of the collection of crania under consideration as a whole, even if a line of demarcation could be established among them by which it would be possible to assign any special form of skull to a particular tribe; but this cannot be done. The number of crania from any given

TABLE I. CRANIA OF NEW ENGLAND INDIANS. MALES.¹

Number	Capacity	Length	Breadth	Height	Index of breadth	Index of height	B. N.	B. A.	Alveolar index	Length of nose	Width of nose	Nasal index	Width of orbit	Height of orbit	Orbital index	Width of frontal	Where from
1	1393	170	143		.841												R. I.
2	1335	184	130	126	.707	.684	100	106	1.06	52	30	.57	39	34	.87	97	"
3	1325	174	134	141	.770	.810	104	98	.94	52	30	.57	39	37	.94	92	"
4	1475	172	138	137	.802	.767	100	98	.98	51	27	.52	40	37	.92	98	"
5	1375	178	140	141	.787	.792	96	98	1.02	52	25	.48	39	38	.97	98	"
6	1370	170	134	134	.788	.788	96	94	.97	54	26	.48	39	38	.97	100	"
7		186	146	130	.785	.699	99	97	.98				39	36	.92	96	"
8		186	142	148	.763	.796	108	106	.98				41	37	.90	95	"
9	1595	194	142	141	.732	.727	110	101	.91	53	25	.47				101	Mass.
10	1610	192	137	140	.714	.729	112	102	.91	55	25	.45	41	37	.90	96	"
11		188	137	133	.729	.707	108	106	.98	50	26	.52	42	36	.85	100	"
12		196	135	142	.689	.719				52	26	.50	41	34	.82	92	"
13		178	141	130	.792	.730											"
14	1435	186	133	135	.715	.726	106	104	.98	52	26	.50	41	34	.82	92	"
15		168	132	142	.786	.845											"
16	1690	187	144	142	.774	.763				57	26	.45	41	42	1.02	99	"
17	1230	176	128	132	.727	.750	97	92	.94	51	25	.49	38	32	.84	97	"
18	1520	174	138	144	.793	.828	104	99	.95	53	24	.45	43	34	.79	97	"
19	1450	178	133	142	.747	.798	113	108	.95	54	26	.48	44	36	.81		"
20	1280	171	134	130	.784	.760				52	22	.42	41	34	.82		"
21		178	144	140	.809	.787	105	101	.96	52	28	.53	41	35	.85		"
22	1390	178	140	133	.787	.747	100	106	1.06	50	26	.52	37	32	.86		"
23		181	133	138	.735	.762	105	93	.88	51	25	.49	42	36	.85		"
24	1660	181	144	140	.796	.773	110	100	.90	55	33	.60	42	35	.83		"
25	1490	176	140	142	.795	.807	110	105	.95	55	30	.54				92	"
26		170	146	154	.859	.906	107	98	.91	55	25	.45	38	34	.89	91	"
27		173	133	136	.769	.786	103	97	.94	53	26	.49	39	36	.92	94	"
28	1220	173	134	130	.775	.751							41	33	.80	90	"
29	1485	186	131	139	.704	.741	98	94	.95	53	27	.50	40	37	.92	97	"
30	1320	182	136	130	.747	.714	107	104	.97	57	30	.52	41	35	.85	108	Maine.
31	1375	187	140	139	.749	.743				49	23	.46	39	35	.89	94	"
32	1271	181	134		.740											90	"
33	1310	170	129	138	.759	.812	98	91	.92	47	24	.51	40	34	.85	91	"
34	1470	194	134	138	.691	.711	110	100	.90	57	23	.40				95	"
35	1325	173	142	132	.821	.763							39	39	1.00		Conn.
36	1440	172	142	142	.826	.826	105	100	.95	54	26	.48	39	36	.92	91	"
37		186	140		.753												"
38	1920	194	162	140	.835	.722											Vermont.
Average	1436	180	138	137	.767	.761	104	100	.96	53	26	.49	40	35	.88	95	
Maximum	1920	196	162	154	.859	.906	113	108	1.06	57	30	.60	44	42	1.02	108	
Minimum	1220	168	129	126	.689	.684	96	92	.88	49	22	.40	37	32	.79	90	
Range	700	28	33	28	.170	.222	17	16	.18	8	8	.20	7	10	.23	18	

place is too small to enable us to set up a standard by which to judge the others, and even if it were not so, the historical evidence of admixture between the different tribes is too plain to admit of any sweeping generalizations. Indeed, if we bear in mind the roving

¹ In these measurements the metric system is used, capacity being given in cubic centimeters, and length etc., in millimeters.

habits of the Indians, the proximity to each other of the village sites¹ even of the different tribes, and then consider how frail was the tie that bound the savage to his Sachem,² it will at once be seen that such a state of affairs must have existed as would make it unsafe to say of any particular cranium that it belonged to a member of this or that tribe.

TABLE II. CRANIA OF NEW ENGLAND INDIANS. FEMALES.

Number	Capacity	Length	Breadth	Height	Index of breadth	Index of height	B. N.	B. A.	Alveolar index	Length of nose	Breadth of nose	Nasal index	Width of orbit	Height of orbit	Orbital index	Width of frontal	Where from
1	1260	168	128	142	.762	.845	101	104	1.03	51	28	.54	39	39	1.00	95	Mass.
2	1200	172	126	130	.733	.756	100	101	1.01	52	25	.48	39	34	.87	88	"
3	1425	171	137	132	.801	.772	102	95	.93	52	29	.55	37	39	1.05	94	"
4		174	135	135	.776	.776	103	102	.99	54	25	.46	42	40	.95		"
5	1310	181	130	132	.718	.729	99	92	.92	46	25	.54	41	33	.80		"
6	1380	174	134	129	.770	.741	103	104	1.01	51	25	.49	41	35	.85		"
7	1390	180	131	134	.728	.744	101	102	1.01	46	25	.54	40	35	.87		"
8	1450	178	134	136	.753	.764	99	101	1.02	49	26	.53	39	37	.94	94	"
9										52	25	.48	39	36	.92	89	"
10		181	128		.707					45	23	.51	36	34	.94	93	"
11	1268	172	133	136	.773	.791	98	96	.98	52	23	.44	37	35	.94	84	"
12	1268	180	138	136	.767	.756				51	27	.52	39	38	.97	92	"
13		178	129		.725					51	27	.52	37	34	.91	92	"
14	1250	174	126	134	.724	.770	102	106	1.03				40	35	.87	87	"
15	1265	172	128	138	.744	.802				53	25	.47	37	35	.94	91	"
16	1205	172	128		.744		109	102	.93	53	26	.49	38	33	.86	88	"
17	1255	170	135	129	.794	.759	99	96	.97	56	25	.44	42	36	.85	94	Maine.
18	1182	174	132	126	.759	.724	104	105	1.01	50	26	.52	38	33	.86	95	"
19		187	127	130	.679	.695	108	108	1.00	52	22	.42	38	36	.94	92	Mass.
20	1425	182	134	130	.736	.714	101	98	.97	49	25	.51	39	37	.94	96	R. I.
21	1445	183	138	143	.754	.781	100	90	.90	47	29	.61	40	37	.92	97	"
22	1315	165	136	134	.824	.812	97	96	.99	48	27	.56	36	34	.94	89	"
23	1295	174	139	130	.799	.747	96	94	.97	45	24	.53	36	32	.88	89	"
24	1225	184	122	128	.663	.696				49	28	.57	38	36	.94		"
25	1580	178	142	136	.798	.764	103	100	.97	50	26	.52	38	37	.97	93	"
26	1320	170	132	132	.776	.776	102	102	1.00	52	26	.50	37	37	1.00	90	"
27	1380	176	133	134	.756	.761	104	105	1.01	50	31	.62	42	36	.85		Mass.
28	1248	178	133	130	.747	.730	104	104	1.00	52	27	.51	43	34	.79	94	Maine.
29	1323	177	136	134	.768	.757	92	96	1.04	57	24	.42	33	39	.84	98	Mass.
Average	1319	175	132	133	.752	.758	101	100	.99	50	25	.51	38	35	.91	91	
Maximum	1580	187	142	143	.824	.845	109	108	1.04	57	31	.62	43	39	1.05	98	
Minimum	1182	165	122	126	.663	.695	96	90	.90	45	22	.42	33	32	.80	84	
Range	398	22	20	17	.261	.150	13	18	.14	12	9	.20	10	7	.25	14	

Of course the presumption is in favor of some member of the tribe that formerly inhabited the locality where it was found, and yet for reasons given above, this conclusion might be far from correct. In view then of the impossibility of discriminating between the skulls

¹Mr. Gallatin estimates the Indian population within the present boundaries of the states of New Hampshire, Massachusetts, Rhode Island, and Connecticut "to have been from thirty to forty thousand souls, before the epidemic disease which preceded the landing of the Pilgrims." He thinks that this population, "principally along the seacoast between the old Plymouth Colony and the Hudson River, was much greater in proportion to the extent of territory, than was found any where else on the shores of the Atlantic, or, with the exception perhaps of the Hurons, in the interior parts of the United States"; and he ascribes "this greater accumu-

lated population to the greater and more uniform supply of food afforded by fisheries than by hunting", and to the fact "that the Indians along the seacoast had been driven away from the interior and compelled to concentrate themselves in order to be able to resist the attacks of the more warlike Indians of the Five Nations." *Archaeologia Americana*, Vol. II, p. 37.

²"These Sachems have not their men in such subjection, but that very frequently their men will leave them upon distaste or harsh dealing and go and live under other Sachems." Gookin, *l. c.*, p. 154.

of the different tribes, and of the linguistic and other evidence of the identity of the people formerly inhabiting this region, I am led to treat this entire series of crania as having belonged to one race. Considered in this light, there is of course a large increase in the number of specimens upon which to base a conclusion, and to this extent, that conclusion is strengthened.

In accordance with this plan the tables on pages 4 and 5 have been compiled from measurements made upon crania now in the Academy of Natural Sciences of Philadelphia, the Army Medical Museum at Washington City, the Peabody Museum of Archaeology and Ethnology in Cambridge, Mass., and in the Museums of the Harvard Medical School, the Boston Society for Medical Improvement, and in the private collection of the late Dr. Warren of Boston.¹ In them I have endeavored to separate these skulls according to the features that distinguish the sexes, and also according to the localities whence they were derived. It must not be forgotten, however, that this latter classification is intended simply to facilitate future reference, and does not carry with it any ulterior significance whatever.

Aside from the brief historical sketch given above, there is but little known as to the precise age of any of these crania. Two of them, No. 22, Table I,² and No. 38, Table I,³ belonged to Indians whose deaths are matters of record, and in the case of some others glass beads and other articles of European manufacture were found in the graves. Whenever this occurs, the burial must, of course, have been subsequent to the arrival of the whites.

One calvarium, No. 13, Table I, (Peabody Museum, No. 10,259) was found *under* a shell heap near Salem, Mass., from which circumstance Mr. Putnam has concluded it to be the oldest skull yet found in New England. It is mesaticephalous though verging very closely on brachycephalous and resembles the crania found in the Florida Mounds.⁴ Of the rest we know nothing, except perhaps, some of the circumstances of their burial. These silent revelations of the spade and pickaxe, however, indicate their origin most unmistakably; and although it is possible that some of the more recent specimens may belong to persons of mixed (Indian and White) blood, yet the skulls themselves do not show it, and the chances of such admixture are so small as scarcely to merit recognition. Except when such mixed unions have taken place on a large scale and been continued for a long period of time, as is the case to-day with some of the Indian tribes of the United States and Spanish America, the presumption as to any single skull found as these were, is always in favor of its being of pure Indian origin.

Referring now to the preceding tables, it will be seen that the average cranial capacity

¹ In this connection I desire to return my thanks to Mr. Parker of the Philadelphia Academy, to the late Mr. Caleb Cook of Salem, to Dr. J. C. Warren of Boston, and to Mr. Applegate and Dr. Wm. F. Whitney of the Harvard Medical School. To the latter gentleman I am under special obligations for practical aid in the work of measurements and for many valuable suggestions.

² This is No. 3274 of the Warren Anatomical Museum of Boston, and is the skull of "Qualish, a New England Indian who died and was buried in Dedham, Mass., in 1774, *æt.* 68.

Every tooth in place."

³ This is No. 1560 of the Army Medical Museum at Washington City, and is said to be the skull of an Indian basket maker who was killed during the Revolutionary war. In a note to the writer, Dr. Otis, the Curator of that Museum, says "it has the largest internal capacity of any North American Indian skull I have ever measured, and is, moreover, extraordinarily brachycephalic."

⁴ Tenth Annual Report of the Peabody Museum of American Archaeology and Ethnology. Cambridge, Mass., 1877

of the 29 supposed adult females is 1,319 cubic centimeters and of the 38 supposed adult males 1,436 c.c., showing a difference of 117 c.c. in favor of the latter. The smallest skull in the collection is No. 18, Table II (Peabody Mus., No. 12,350) from a shell heap on Great Deer Island, Maine, which measures 1182 c.c.; and the largest is No. 38, Table I,¹ (Army Medical Museum No. 1560) which reaches the enormous size of 1920 c.c. The range or difference between the two extremes amounts to 738 c.c., which is less than that of the Indians of the Santa Barbara Islands, California, or of the Moundbuilders of the Cumberland valley.² Assuming, with Dr. J. Aitken Meigs, 1376 c.c. to be the average of the North American Indian,³ it will be seen that the mean of the two sexes, 1377 c.c., as given above, accords with it in a striking manner. This is greater than the Indians from the Santa Barbara Islands,⁴ 1310 c.c., the Tennessee Moundbuilders, 1341 c.c.,⁵ or the Peruvians of the coast, 1230 c.c.,⁶ but does not equal the Eskimos of Greenland, 1392 c.c., or of Alaska, 1404 c.c.⁷ Of the entire series, twenty-five are below 1350 c.c., or microcephalic, and thirteen above 1450 c.c., or macrocephalic, and thirteen are between the two, or mesocephalic, to which class the collection taken as a whole also belongs.⁸

The index of breadth,⁹ or the relation of the greatest breadth between the parietals, to the length measured through the glabella to the most prominent point of the occiput, is .767 for the males, and .752 for the females; or, taking the mean of the two sexes and leaving off the fraction, .759 for the whole collection. This brings them within the class of mesaticephali, though by a very narrow margin. Of the entire collection, twenty-six have an index below .750, and hence may be classed as dolichocephali; nine have an index greater than .800 and are, therefore to be ranked among the brachycephali or short skulls, whilst the remaining thirty-one have indices ranging between these limits and thus, of course, belong to the mesaticephali. Of this last group, the index is .775. The females are, however, slightly more dolichocephalic than the males, the figures being .771 for the former and .779 for the latter.

¹ Notwithstanding the very unusual size of this skull, I have not felt at liberty to omit it from the table for the following reasons: 1st, its history is pretty well known; 2d, there are crania of undoubtedly aboriginal origin now in the Peabody Museum of Cambridge, *i. e.*, one from San Clemente Island, California, that measures 1747 c.c., and one from a mound in Tennessee that reaches 1825 c.c., that are abnormally large when compared with the averages from their respective localities; 3d, it is equalled, if not surpassed, by other specimens in the Peabody Museum, in the measurements of length, breadth and height, respectively, though none of them equals it when all the measurements are taken together. It is proper to add that the capacity of this skull was measured with No. 8 shot, whilst in all the others selected peas of nearly uniform size were used. This, of course, to a certain extent, vitiates the comparison, as very different results are obtained when different materials are used; but it is believed that the excess of this skull over the one next to it in point of size, No. 16, Table I (a Natick Indian in the collection of the Philadelphia Academy) which measures 1690 c.c., is so great as to allow a very wide mar-

gin for the inequality caused by using different methods of measurement. Be this as it may, my object in singling out this particular skull, was to mark the differences rather than to institute a comparison where surely none exists.

² Twelfth Annual Report of the Peabody Museum, 1880.

³ Catalogue of Human Crania in the Collection of the Philadelphia Academy of Natural Sciences, p. 10.

⁴ Check-list of the Army Medical Museum. Washington, 1876. Twelfth Annual Report of the Peabody Museum, pp. 498 *et seq.*

⁵ Eleventh Annual Report of the Peabody Museum, pp. 224 and 361. 1878.

⁶ Fourth Annual Report of the Peabody Museum, p. 18. 1871.

⁷ Check-list of the Army Medical Museum, Washington, 1876.

⁸ For this classification see Prof. Wm. H. Flower, in the Osteological Catalogue of the Royal College of Surgeons, Part 1, Man. p. 252. London, 1879.

⁹ Index of breadth = $\text{breadth} \times 1000 \div \text{length}$.

As was to have been expected in a collection, composed as this is of the crania of different tribes, the range is very wide, extending from .859, No. 26, Table I, (Boston Society for Medical Improvement, No. 1376) to .663, No. 24, Table II (Academy of Natural Sciences of Philadelphia, No. 1040). This latter specimen is catalogued as "a woman *aetat* 70, with a singularly elongated head." Upon examination, the sagittal, coronal and lambdoidal sutures were found to be closed. This may have been due to the age of the woman, and hence the peculiarly elongated form of the cranium cannot be ascribed to the premature closing of the sagittal suture, though that, of course, is possible. However, there are in this collection other perfectly normal crania that approach it too closely in this respect, *e.g.* No. 19, Table II, and No. 12, Table I (Peabody Museum, Nos. 660 and 10,249), to justify us in rejecting it as an aberrant form.

The index of height for the males is .761, for the females .758, and for the two sexes taken together .759. Compared with the indices of breadth, as is done in order to get at the shape of the head, we find that among the former the height is less than the breadth, whilst among the latter it is greater. The difference, however, is very small, amounting in either case to only 1 m.m. actual measurement. Taking the collections as a whole, and the indices of breadth and height are found to be equal, but if the skulls be considered singly, twenty-seven of them have the index of breadth greater than that of height, whilst in twenty-nine the reverse is the case.

Coming now to the facial measurements, and beginning with the alveolar index or the relation of the basi-nasal length to the basi-alveolar, estimating the former at 100, and it will be found to be in the males .96, and in the females .99.¹ Of the entire collection, twenty-six are orthognathous, twenty mesognathous, and only three that can be called strictly prognathous. Taking the two sexes together, the index of the whole is .975, or orthognathic with a strong tendency to mesognathism.

The nasal index of the males is .49, and of the females .51, which brings them both, when considered either separately or together, among the mesorhine. There are, however, in the series fourteen that have an index below .48 or are leptorhine, twelve with an index above .53 or platyrhine, and thirty that are within these limits or mesorhine.

The orbital index is .88 for the males and .91 for the females, or .895 for the two. This classes them with the megaseme, though just within the limits.² As is usually the case, the orbit among the females is proportionately more open than among the males.

Summing up the result of these measurements, the average skull of this series is found to be of medium capacity and mesaticephalic, with a decided tendency towards dolichocephalism. It is orthognathic, mesorhine and megaseme, but by very small margins. These measurements and the technical description based upon them are believed to be correct; in fact they agree so closely with those made by Dr. Wilson upon a number (30) of skulls³ of the same people that there can be little doubt as to their accuracy; and yet after all it must be admitted that, in point of fact, so far as this collection is concerned, the

¹ Prof. Flower, of the Royal College of Surgeons, prefers this method of estimating the forward projection of the face for the reason that it is easy of application, "and if in some cases not strictly accurate, in the large majority it certainly gives the desired information." He classifies all below .980 as orthognathous. From .980 to 1.030 mesognathous. Above

1.030 as prognathous. In the first of these classes are to be found most Europeans, and in the last most negroes.

² Below .840 is microseme; above .890 is megaseme; between the two is mesoseme.

³ Prehistoric Man, p. 186. London, 1876.

typical cranium, as adduced from the measurements, has no real existence. Undoubtedly there are skulls in the collection that unite many of the characteristic features indicated by the above measurements, and it is possible that there may be a few which combine them all, but the variations are so great that the eye is hardly able to single out any one form as typical. For this purpose one will do as well as another, but not one is satisfactory. In this respect there is a marked difference between this collection and those from some other localities. Take for instance, the crania from the stone graves of Tennessee now in the Peabody Museum, or those from Greenland, now in the Army Medical Museum, and there runs through each series a certain prevailing form which is at once recognized. Here, however, no such uniformity exists. The crania differ among themselves in every possible way; and, in their distinguishing features, are so hopelessly mixed, that even though the range, or difference between the different extremes is no greater than in either one of the other collections, yet the entire series, judged by the eye, is too colorless to permit of the recognition of any type or standard save that furnished by the calipers and the "rule of three." These, however, do give us rather a solid foundation upon which to build, and justify us in asserting that, whilst the entire series considered with reference to the index of breadth does not supply us with sufficient data to reconstruct the typical prehistoric Indian skull of New England, granting such a thing to have existed, it does indicate an admixture of the different forms such as might be looked for in a collection made from the potter's field of London or New York. This is in accord with what is known of the existence of different forms of crania among the American aborigines, and of the circumstances under which this collection was made. It is, as has been said, composed of crania from different tribes (though belonging perhaps to the same linguistic family) and it contains skulls that range from the extreme of dolichocephalism to a moderate degree of brachycephalism. Though, strictly speaking, it occupies a medium position between these two classes, yet the tendency is so decidedly to the former that it may be said partially to bear out the conclusion of Dr. Busk as to the prevalence of the dolichocephalic form of skull upon the Atlantic coast of North America.¹

As a matter of interest and for the sake of comparison the following table of mean measurements of crania has been added. It might have been indefinitely extended, but for obvious reasons it was deemed best to limit it to crania from North America. Numbers 1, 2 and 3 are taken from Dr. Wilson's *Prehistoric Man*; Nos. 6 and 7 are made up from the check-list of the Army Medical Museum, and Nos. 4 and 5 are from the records of the Peabody Museum of Ethnology at Cambridge.

¹ *Journal of the Anthropological Institute of London*, for April, 1873, p. 95.

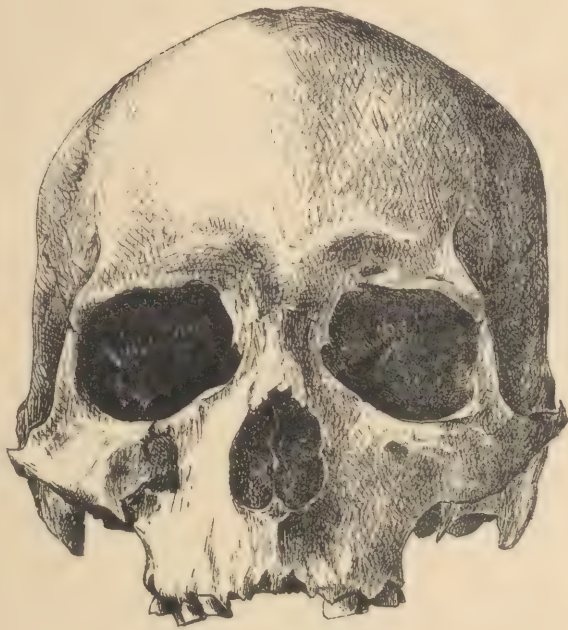
TABLE III. MEAN MEASUREMENTS OF CRANIA OF AMERICAN INDIANS.

	Number of Specimens	Capacity	Length	Breadth	Height	Index of Breadth	Index of Height	Width of Frontal	Alveolar Index	Nasal Index	Orbital Index
1. Huron—Males	39		187	139	139	.743	.743				
Females	18		179	132	131	.737	.732				
2. Iroquois—Males	8		187	140	140	.749	.749				
Females	2		175	137	133	.783	.760				
3. Algonkin Lenapé—Males	19		182	140	138	.769	.758				
Females	4		173	139	133	.803	.769				
4. Santa Barbara—Males	80	1372	181	137	131	.760	.725	93	.99	.48	.92
Females	54	1248	174	135	126	.777	.727	89	.99	.49	.93
5. Tennessee Mounds ¹ —Males	43	1401	164	146	145	.891	.886	95			
Females	34	1301	159	142	140	.893	.871	90			
6. Greenland—Males	55	1433	186	132	141	.710	.755				
Females	21	1275	180	127	133	.709	.741				
7. Alaska—Males	31	1449	177	148	131	.835	.743				
Females	10	1281	170	141	127	.836	.747				
8. New England—Males	38	1436	180	138	137	.767	.761	95	.96	.49	.88
Females	29	1319	175	132	133	.752	.758	91	.99	.51	.91

¹ Flattened posteriorly.

EXPLANATION OF THE PLATES.

The figures on the accompanying plates were drawn by means of Broca's Stereograph, from two Indian crania in the collection of the Peabody Museum, and are reproduced at one half their diameters. Figures 1 and 2 of each plate represent different views of skull No. 14, Table I (P. M. No. 11,249), and figures 3 and 4 were taken from No. 11, Table II (P. M. No. 10,231).



1



3



2



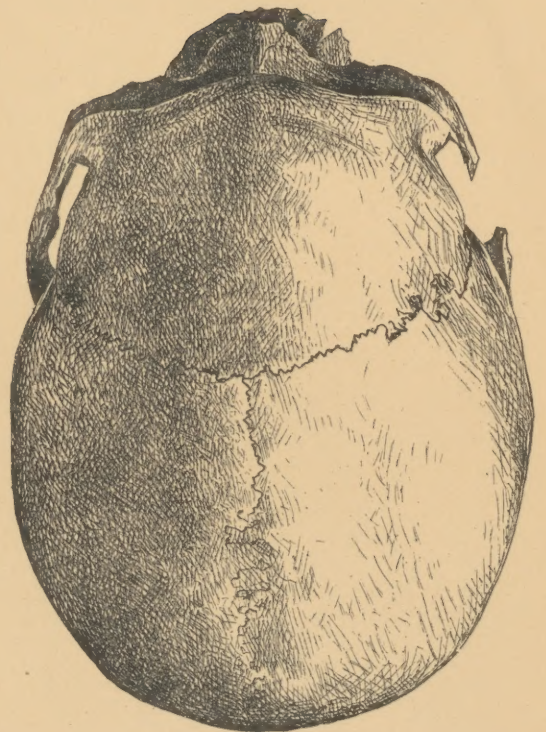
4

The Helix Press, Boston, U.S.A.

NEW ENGLAND CRANIA.
1 & 2. Man from West Andover, Mass
3 & 4. Woman from Saugus, Mass.



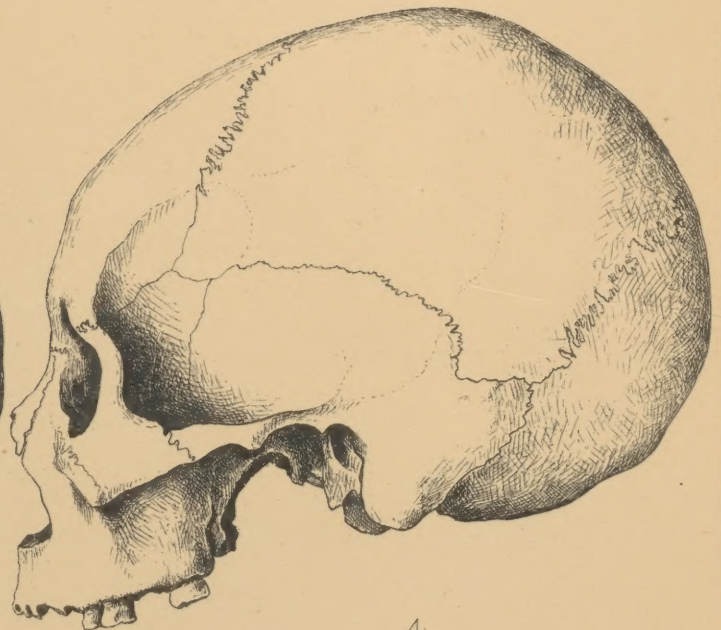
1



3



2



4

The Hittotype Printing Co. 211 Tremont St. Boston.

NEW ENGLAND CRANIA.
1 & 2. Man from West Andover, Mass.
3 & 4. Woman from Saugus, Mass.

